



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,719	04/05/2006	Roger Lacroix	NB/4-22958/A/PCT	5009
324	7590	10/19/2009	EXAMINER	
JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			LEONG, NATHAN T	
			ART UNIT	PAPER NUMBER
			1792	
			NOTIFICATION DATE	DELIVERY MODE
			10/19/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

andrea.dececchis@ciba.com
deborah.pinori@ciba.com
sonny.nkansa@basf.com

Office Action Summary	Application No. 10/574,719	Applicant(s) LACROIX, ROGER	
	Examiner NATHAN T. LEONG	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Application Status

Applicant's amendments and arguments filed 7/21/2009 are acknowledged. Claims 4 and 12 are canceled, claims 1, 2, 5, 10, and 13 have been amended, and no claims have been added. In view of the amendments, the previous U.S.C. 112 have been withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3, 5-11, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lacroix et al US 6511535 in view of Karlinski US 5940099.

Per claim 1, Lacroix teaches the method for printing textile fibre materials using an ink-jet printing process (see abstract). Lacroix further teaches the method comprising an aqueous ink with at least one anionic acid dye (col. 1, lines 30-40),

Art Unit: 1792

dipropylene glycol (col. 23, lines 20-27) and teaches that the weight composition of the components within the ink, based on the total weight of the ink, are result-effective variables, and therefore, one of ordinary skill in the art would be able to optimize said variables to arrive at the claimed range via routine experimentation (see MPEP 2144.05). Lacroix also teaches the claimed viscosity range (col. 22, lines 55-62). Additionally, per claims 3 and 11, Lacroix teaches viscosity as a result-effective variable and thus, one of ordinary skill in the art would be able to optimize said variables to arrive at the claimed range via routine experimentation (see MPEP 2144.05).

Lacroix is silent regarding the claimed ink-jet print head and supply layer. However, Karlinski teaches an ink-jet print head with ink supply through a porous medium as claimed. Karlinski teaches an ink-jet print head comprising an ink supply layer receiving ink from an external ink reservoir (col. 3, lines 45-52), said ink supply layer having a first and second side and comprising a porous medium having a plurality of pores therein and a plurality of holes extending therethrough (see Karlinski, claim 1). It would have been obvious to one of ordinary skill in the art to combine the deposition methods taught by Lacroix and Karlinski because Lacroix teaches a process using an ink-jet deposition process, while Karlinski teaches an drop on demand ink jet system which can deposit dye material in an improved process that has cured the deficiencies of the previous drop on demand ink jet systems (see col. 1 of Karlinski).

Per claims 2 and 10, Lacroix teaches many of the species listed in Applicant's claim 2 to be used as the anionic acid dye (see col. 1 to col. 6, and Lacroix claim 1).

Per claims 5 and 13, Lacroix teaches using ϵ -caprolactam (col. 24, lines 10-30). Lacroix

Art Unit: 1792

teaches that the weight composition of the components within the ink, based on the total weight of the ink, are result-effective variables, and therefore, one of ordinary skill in the art would be able to optimize said variables to arrive at the claimed range via routine experimentation (see MPEP 2144.05).

Per claim 6, Karlinski teaches the ink-jet print head comprising a nozzle layer defining a plurality of ejection nozzles (col. 2, lines 50-52), an ink supply layer formed from a porous material having a multitude of small interconnecting pores, with a plurality of connecting holes from the rear surface to the front surface, each hole being aligned to connect between the ejection nozzles (col. 2, lines 50-55, and Karlinski, claim 1), and a deflection layer comprising a plurality of transducers related to the connecting holes (col. 2, lines 54-56). Per claim 7, since a pattern is desired to be formed through the process, one of ordinary skill would design the supply layer to have a pattern of ink distribution channels. Thus, it would also be obvious to have at least one hole passing through the layer to form the desired pattern (since this is the purpose of having the ink distribution channels).

Per claim 8, Karlinski teaches that the transducers are piezoelectric elements (col. 2, lines 60-63). Per claim 9, Lacroix teaches having nitrogen-containing or hydroxyl-group containing fibrous materials are printed (col. 24, lines 55-59). Per claim 14, Lacroix teaches natural or synthetic fibrous polyamide materials to be printed (col. 25, lines 20-27).

Response to Arguments

4. Applicant's arguments filed 7/21/2009 have been fully considered but they are not persuasive.

Applicant has acknowledged on page 12 that Lacroix teaches that the viscosity of the ink can be adjusted to the specified range. Applicant references the natural or synthetic thickeners used to adjust viscosity rather than the dipropylene glycol. However, using dipropylene glycol to adjust the viscosity is not a limitation of the instant claim.

With regards to Applicant's arguments in paragraph 2 of page 12, drawn towards there being no reasonable expectation or disclosure of the amount of dipropylene glycol, Examiner takes the position as stated above, that even though Lacroix is silent regarding the exact range of the dipropylene glycol, Lacroix does teach that the weight compositions of the desired ingredients in the ink are result-effective variables (see col. 23 and 24). Since dipropylene glycol is a desired ingredient in the ink, one skilled in the art would be able to optimize the exact amount of dipropylene glycol to be mixed in the ink via routine experimentation (MPEP 2144.05). Examiner takes the position that the claimed range is not patentable in the absence of new or unexpected results.

In regards to Applicants arguments on page 13, drawn towards the benefits of said composition, the prior art Lacroix lists a number of the benefits similar to those of the immediate invention (col. 26, lines 39-47). Examples 1-6 of Applicant's specification show that using the specific ink compositions in the Examples will yield "a brilliant multicolour print having good fastness properties". Lacroix teaches obtaining

Art Unit: 1792

multicolour patterns having excellent fastness properties (col. 26, lines 39-47), and therefore, it is unclear what unexpected results are exemplified by Examples 1-6 in the immediate specification. Additionally, Examples 1-6 are silent regarding the lack of the "unexpected results" when one does not use the claimed range of 30-45% dipropylene glycol (i.e. it is unclear the "unexpected results" would not be the same when using a different percent of dipropylene glycol).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **NATHAN T. LEONG** whose telephone number is (571)270-5352. The examiner can normally be reached on Monday to Friday, 9:00am to 6:30pm EST.

Art Unit: 1792

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571)272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NATHAN T LEONG/
Examiner, Art Unit 1792

/Timothy H Meeks/
Supervisory Patent Examiner, Art Unit 1792